

in the drake Northern Pintail in the same stage of plumage. There is now ample evidence that this character is indicative of a close relationship between the species mentioned.

There is, so far as I am aware, no record of a white neck-ring occurring as a variant in any stage of plumage of either the Red-crested Pochard or the Chilean Pintail. From the morphology of the drake hybrid under discussion we must postulate that one of the parental species, clearly the Chilean Pintail, is related to the Northern Pintail and carries genes for certain characteristics of that species which, in the present case, have gained expression as a result of hybridisation. There can be no reasonable doubt that the group of yellow-billed pintails of the southern hemisphere, which includes the Chilean Pintail, must have evolved from the same stock as the primarily northern hemisphere group of blue-billed pintails. In addition, the occurrence of a whitish neck-ring in the hybrid not only indicates relationship with the Northern Pintail and other species of *Anas* mentioned above, but also supports the hypothesis that this is an ancient character that is latent in numerous species of *Anas*.

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The Crowned Crane at Lake Rudolf

by OSCAR T. OWRE

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It is unusual if one does not find in the narratives of African explorers and adventurers, observations of animal life. Titles of their works, however, are often of such nature that even should they come to the attention of the biologist they would fail to attract his curiosity. The limbo of such titles concerning Kenya yields to ornithology a book by Arthur H. Neumann (1898), *Elephant-Hunting in East Equatorial Africa*. Sir Frederick Jackson, it is true, noted (1938:323) Neumann as having been observer of the now famous bee-eater-bustard relationship, but there is no mention of Neumann or of his publication in Jackson's (1938) bibliography of Kenya ornithology.

Among the many interesting observations made by Neumann, the third European to visit the shores of Lake Rudolf, is the notation (*ibid*:

290) that near the north end of the lake he encountered flocks of cranes feeding along the areas of cultivated shoreline. These cranes, Neumann wrote, were different in both calls and appearance from Crowned Cranes farther south.*

On January 19, 1959, the author, a member of the R.E. Maytag-University of Miami Expedition to Lake Rudolf, collected an adult male Crowned Crane, *Balearica pavonina* (Linnaeus), one of a pair of birds, from the marshes at the north-east end of the lake, not many miles from the point at which Neumann must have made his observations. This specimen is a part of the collections of the Department of Zoology of the University of Miami. Thus, the observations of an elephant hunter, keenly interested in natural history, are, after approximately 60 years, acknowledged and substantiated and *B. pavonina* is for the first time credited to the avifauna of Kenya. This record, however, is of greater interest than simply that of a species added to an avifaunal list.

There is at present an apparent hiatus between the northward range of the South African Crowned Crane, *Balearica regulorum* (Bennett) and the southward range of *B. pavonina* (see, e.g., Walkinshaw, 1964:356). Just how great is the hiatus in range between these two closely related species of marsh-dwelling cranes and what may have been some of the factors which have determined it? Mr. Dennis Paulson, also a member of the Maytag-Miami Expedition, observed *B. regulorum* near Maralal, about 80 miles south of Lake Rudolf, on January 4, 1959. Lake Rudolf being approximately 145 miles in length, a distance of about 225 miles, then, separates points at which these species are at present known to occur.

The population of *B. pavonina* which is centred north of Kenya seems to a considerable extent concentrated about the Nile and its tributaries. Here, of course, are the marshes which it inhabits. Somewhat similar marshes rim the north end of Lake Rudolf. Between the lake and the Nile is an extensive area characterized by largely semi-arid conditions.

Certain speculations may now be introduced. It seems accepted knowledge that Rudolf, although at present occupying a landlocked basin, was, only a very few thousand years ago, more extensive than now, and, its waters at a much higher level, the lake drained into the Nile (see e.g., Worthington, 1932:99). Now, it remains to be determined how large the population of cranes at Rudolf is currently and if this population represents a breeding one or one of only temporary visitation. I should note that the two birds I observed were engaged in what I interpreted as courtship display (although there was no obvious enlargement of the gonads of the specimen collected). It should also be noted that the combined observations of von Höhnel, Neumann, and myself of cranes at the lake cover a considerable period of late winter and spring. If the population is not of merely irregular occurrence, and I suggest that it is not, has its establishment here been a recent one or may it be viewed as a "relict" population, established at the time when Rudolf was a tributary of the Nile?

* Neumann was not the first to observe cranes here, for Ludwig von Höhnel (1894, 2: 175) wrote that two or three cranes, one presumes of the same species, were seen at the north end of the lake in 1888. His narrative of the discovery of Lake Rudolf also contains numerous references to birds and has likewise been a part of the limbo referred to above, being uncited by Jackson and apparently by succeeding ornithologists working in Kenya.

A second speculation concerns the nature of the shoreline when the water level was higher and rainfall was greater than at present. One would expect the littoral area to be quite different from the barren area much of it now is. Habitat appropriate for the cranes may well have existed as far south as the present foot of the lake, presumably about the Saguata Swamp to the south, and possibly beyond this. Assuming that the two species of cranes had at one time a contiguous or overlapping range in this area, the present period of decreased rainfall and increasing aridity may have been a determining factor in the present hiatus in range.

What of the future? It seems evident that if the rapid drop in Rudolf's level continues, much of this shallow lake will dry up or, in the process, be reduced to seasonal swampy areas flooded by the Omo River. Neumann (*loc. cit.*: 339), one might add, noted that with north winds the sudd-like aquatic growth surrounding the north end of the lake was pushed southward into the open water. Dropping lake levels attended by constant silting from the Omo favour the establishment of this growth along shallow shorelines. Even now, the delta of the Omo and the surrounding marshes are spreading rapidly southward into the lake. Thus, favourable habitat for *B. pavonina* may, despite increasing aridity, gradually extend south to a point considerably closer to the range of *B. regulorum*.

During the preparation of a manuscript on the avifauna of the Lake Rudolf area, I have become increasingly impressed with the opportunity which the interpreted history of the Rift Valley lakes affords our speculations concerning the fluctuations in the ecology and thus in the history of the populations of such birds as *B. pavonina*.

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On Moore's Olive Bulbul (*Pycnonotus simplex* subsp.)

by A. HOOGERWERF

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The only series of freshly collected material which I studied originates from Java's most western peninsula Ujung Kulon; in all other territories we visited in recent years (Princes Island, other islands in the Sunda Strait and the Karimundjawa, Bawean and Kangean Islands) the species was not found. In Ujung Kulon this bulbul may not be called rare though it seems to prefer the south coast, bordering the Indian Ocean which may be the case in the other parts of Java as pointed out earlier (Hoogerwerf⁶).

The series from this area consists of 15 specimens among which are nine males. Though in plumage both sexes are said to be alike the five adult females before me have more olive in the brown of the upper parts than any of the nine males, which makes both sexes at once distinguish-